Sent to Commo

SAPC /5833
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May 8, 1957

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To: [redacted]

Subject: Ref Report No. 11 from Detachment A
(1 April to 15 April 1957)

Following comments apply to the itemized trouble report on System Three.

1. Your diagnosis of first L. O. drift problem agrees essentially with our diagnosis. A procedure similar to the one outlined in your report is being followed in the factory. If instability is found in the field, it must be due to aging, shake, or temperature changes. The temperature effects are being investigated currently.

2. One reason for the third L. O. boards not scanning properly when the system is initially turned on has been that the frequency sweeps beyond the limits set by the marker crystal. The modification kits furnished about one month ago should remedy this situation. In any event, general stability of operation is better after an initial warm-up period of about 10 minutes.

3. The "Ref-Crystal" in the test set is used in conjunction with the test of System Three when the 04A board is used. In the use of the 04A board, second L. O. crystals are selected by manual switching before flight, and if a crystal is selected which does not lie in the center of the L. O. frequency range, then the test set high frequency signals will not pass through the receiver. The "Ref-Crystal", whose frequency is at the center of the second L. O. frequency range, can then be switched in to permit the test reception of the input r-f signals. Initial shipments of 04A assemblies are currently being made by the factory, and hence, it is expected that you will receive them soon.

file A-101 (reports)

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Copy 5 of 6

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4. An Allen wrench with a screwdriver-type handle is normally contained in a tool kit furnished with each system. We will send you a few spares, nonetheless.

5. The test set 1-f crystal oscillators are tuned with a single tuned-circuit adjustment for all crystals. There has been no difficulty experienced in obtaining frequencies proper to within 2 kc. The output level of the 1-f oscillators should be about 200 millivolts. The opinion here, in regard to the particular test described on System Three serial number seven, is that possibly the fault may lie in the receiver, or that the output level may be lower than normal. Any further information found in the field on this point would be of value.

6. Wires are wrapped around terminals in the test set because MIL specs require this to be done, and because the attempt is being made to build all equipment to MIL specs wherever possible.

7. In regard to the misalignment of hold-down nuts on the third L. O. test fixture, the manufacturer has been notified.

8. In regard to short circuit on third L. O. board, manufacturer has been notified.

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